APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,202	11/19/2003	Mark D. Wasson	P68795US0	4117

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EXAMINER
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ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/716,202	WASSON ET AL.
	Examiner	Art Unit	
	Paras Shah	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 November 2003*.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-55* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-55* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date *03/10/2004 and 03/17/2004*

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1.   This communication is in response to the Application filed on 11/19/2003. Claims

1-55 are pending and have been examined.

Specification

2.   The title of the invention is not descriptive. A new title is required that is clearly

indicative of the invention to which the claims are directed.

Claim Objections

3.   Claims 3 and 28 are objected to because of the following informalities: "a text

passage" should be "the text passage" in line 2. Appropriate correction is required.

4.   Claims 5 and 30 are objected to because of the following informalities: "a text

passage" should be "the text passage" in line 2. Appropriate correction is required.

5.   Claims 4, 9-15, 29, and 34-40 are objected to as being based upon an objected

to claim.

Claim Rejections - 35 USC § 101

6.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

the claimed invention is directed to non-statutory subject matter.

Claims 26-40 are directed toward non-statutory subject matter.

The term "computer usable storage medium" is not fully explained in the

Applicant's specification. Hence, the term computer usable medium has also been

interpreted to include signals and carrier waves, which are non-statutory. See MPEP

2106.01 [R-5].

Claim Rejections - 35 USC § 112

7.   The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of
> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the
> art to which it pertains, or with which it is most nearly connected, to make and use the same and shall
> set forth the best mode contemplated by the inventor of carrying out his invention.

8.   Claim 16 is rejected under 35 U.S.C. 112, first paragraph, because the

specification, while being enabling for "text pattern recognition rule", does not

reasonably provide enablement for the cited limitation as a result of undue breadth. The

specification does not enable any person skilled in the art to which it pertains, or with

which it is most nearly connected, to make and use the invention commensurate in

scope with these claims. The claim is a single means claim which covers every

structure for achieving the stated property see MPEP2164.08(a).

9.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

10.   Claims 4, 29, and 44 rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention. The limitation "other interesting attributes of the text"

is unclear as to what the Applicant is referring to. Hence, for the purposes of compact

prosecution the limitation was interpreted to mean any additional attribute.

11.   Claims 8, 25, 33, and 48 are rejected under 35 U.S.C. 112, second paragraph,

as being indefinite for failing to particularly point out and distinctly claim the subject

matter which applicant regards as the invention. The limitation "constituent attributes

assigned yes-no values to patterns of base tokens, where the entire pattern is

considered to be a single constituent with respect to some annotation value" is unclear

as to what the Applicant is referring to. Hence, for the purposes of compact prosecution

the limitation was interpreted to mean constituent attributes assigned to base tokens,

where the series of base tokens identify a pattern.

Claim Rejections - 35 USC § 102

12.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

13.   Claims 1-4, 8, 9, 10, 12, 14-16, 18-21, 25-30, 33-35, 37, 39, 41-44, 48-50, 52, 54

and 55 are rejected under 35 U.S.C. 102(b) as being anticipated by Cunningham *et al.*

(Developing Language Processing Component with GATE (a User Guide), 2001-2002)).

As to claims 1, 26, and 41, Cunningham *et al.* discloses a fact extraction tool set

for extracting information from a document, comprising:

means for annotating a text (see sect. 6.1, 6.4, and 6.5) (e.g. The text is

being annotated by part of speech, semantics, tokenized, among others); and

means for extracting facts from the annotated text (see page 104, 6.8)

(e.g. The example is extracting the phrase 800,000, US dollars from the text

using the annotations).

As to claims 2, 27, and 42, Cunningham *et al.* discloses wherein,

the means for annotating a text comprises means for assigning syntactic

and semantic attributes to a text passage (see sect. 6.4 and 6.5, and page 62,

sect. 4.4.2, last paragraph) (e.g. From the cited sections it is seen that the text

passage is annotated by the semantics and syntax of each word) by at least one

of parsing the text passage (see page 68, sect. 4.5.2, 1st paragraph) and

applying text annotation processes (see sect. 6.4 and 6.5)(e.g. It is evident that

semantics and syntactic elements are annotated and see sect. 6.1, which

describes orthography annotations) other than parsing the text passage.

As to claims 3, 28, and 43, Cunningham *et al.* discloses wherein,

the means for assigning syntactic and semantic attributes to a text

passage (see sect. 6.4 and 6.5, and page 62, sect. 4.4.2, last paragraph)

comprises means for breaking the text passage into its base tokens and

annotating the base tokens and patterns of base tokens (see sect 6.1, page 94,

1st paragraph) (e.g. It is implied that the annotations will be made to base tokens

as well as patterns of base tokens depending on relationships and coreferences.) with a number of orthographic (see sect 6.1, page 94, 1st paragraph), syntactic (see sect. 4.4.2, last paragraph), semantic (see sect. 6.5), pragmatic (see sect. 6.7.1, 1st paragraph) (e.g. The applicant refers to pragmatic as being identifying quotations, see Applicants specification, page 23, line 4) and dictionary-based attributes (see sect. 6.6.2 and see 6.2) (e.g. A table is used to determine id strings are of the same entity and the latter citation refers to names and cities).

As to claims 4, 21, 29, and 44, Cunningham *et al.* discloses wherein,

the attributes include tokenization (see sect. 6.1), text normalization (see , part of speech tags (see sect. 6.4.), sentence boundaries (see sect. 6.3), parse trees (see page 62, sect. 4.42, last paragraph-page 63, first three lines) (e.g. It is seen that annotations can be represented in hierarchical representation of a parse tree), semantic attribute tagging (see. sect. 6.5) and other interesting attributes of the text (see sect. 6.6).

As to claims 8, 25, 33, and 48, Cunningham discloses, wherein the means for breaking the text passage into its base tokens and annotating the base tokens and patterns of base tokens comprises independent annotators, wherein the annotators are of three types comprising:

token attributes, which have a one-per-base-token alignment, where for the attribute type represented, there is an attempt to assign an attribute to each

base token (see sect. 6.1, 6.1.2) (e.g. From the cited sections, once the text is

broken into tokens, the attributes are identified, regarding punctuation, symbols,

space, number, and orthographic type).;

constituent attributes assigned yes-no values to patterns of base tokens,

where the entire pattern is considered to be a single constituent with respect to

some annotation value (see page 62, last paragraph, and page 63, 1st three

lines, and table 4.1.) (e.g. From the tokenization, pos is used and tagged.

Further, the annotations can be used to how the hierarchical representation of

the text. Further, it is seen that the all of the tokens represent a pattern

associated with the sentence.;

and links, which assign common identifiers to coreferring and other related

patterns of base tokens (see sect. 6.6) (e.g. In this cited section relations

between identities are found for match names (see sect. 6.7) (e.g. pronominal

coreference). Hence, it is implied by the reference that identifiers are used to

relate associated pronouns (See page 101, "Pronoun resolution")) .

As to claims 9, 10, 34, 35 ,49, and 50 Cunningham *et al.* discloses wherein,

the means for annotating a text further comprises means for associating

all annotations assigned to a particular piece of text (see page 81, 2nd paragraph,

three bullets) (e.g. From the cited section it is evident that a pattern is specified

by specifying attributes to the tokens and then specifying an annotation based

upon previous assignment), with the base tokens for that text to generate aligned

annotations (e.g. This is implied when matching patterns.)

As to claims 12, 16, 37, and 52, Cunningham discloses wherein,

the means for identifying and extracting potentially interesting pieces of

information text (see page 104, 6.8) comprises at least one text pattern

recognition rule written in a rule-based information extraction language (see page

81, 2nd paragraph, three bullets and sect. 6.1.1) (e.g. From the cited section it is

evident that a pattern is specified by specifying attributes to the tokens and then

specifying an annotation based upon previous assignment. LHS and RHS rules

are used),wherein the at least one text pattern recognition rule queries for at

least one of literal text, attributes, and relationships found in the aligned

annotations to define the facts to be extracted (see page 81, last two paragraphs,

and pages 82 and 83) (e.g. It is evident that from the input, attributes or

annotations are specified and the latter citation is shown as a variety of data

formats are possible and are looked upon in an existing list, which are compared

(queried)).

As to claims, 14,18, 29, and 54, Cunningham *et al.* discloses wherein,

the at least one text pattern recognition rule comprises a pattern that

describes the text of interest (see page 82, 3rd paragraph, and rule below) (e.g.

From the cited portion a definition of GazLocation is given for a portion of the

pattern. This is an example of a rule.), a label that names the pattern for testing

and debugging purposes (see page 81, 2nd paragraph and 2nd bullet) (e.g. A

label; for debugging can be set in order to see any conflicts.), underneath); and

an action that indicates what should be done in response to a successful match

(see page 142, numeral2, subnumeral 2) (e.g. The algorithm in the cited section

is used in the JAPE rules, which is a finite state machine) .

As to claims 15, 19, 40, and 55, Cunningham *et al.* discloses wherein,

wherein the means for identifying and extracting potentially interesting

pieces of information further comprises at least one auxiliary definition statement

used to name and define a fragment of a pattern (see page 84, 1st and 2nd

paragraph) (e.g. The auxiliary definition or label is assigned to the year based on

the pattern of word in or by found in the text)..

As to claim 20, Cunningham *et al.* discloses wherein, a text annotation tool

comprising:

means for assigning syntactic and semantic attributes to a text passage

(see sect. 6.4 and 6.5, and page 62, sect. 4.4.2, last paragraph) comprises

means for breaking the text passage into its base tokens and annotating the

base tokens and patterns of base tokens (see sect 6.1, page 94, 1st paragraph)

(e.g. It is implied that the annotations will be made to base tokens as well as

patterns of base tokens depending on relationships and coreferences.) with a

number of orthographic (see sect 6.1, page 94, 1st paragraph), syntactic (see

sect. 4.4.2, last paragraph), semantic (see sect. 6.5), pragmatic (see sect. 6.7.1,

1st paragraph) (e.g. The applicant refers to pragmatic as being identifying

quotations, see Applicants specification, page 23, line 4) and dictionary-based

attributes (see sect. 6.6.2 and see 6.2) (e.g. A table is used to determine id

strings are of the same entity and the latter citation refers to names and cities).

means for associating all annotations assigned to a particular piece of text

with the base tokens for that text to generate aligned annotations. (see page 81,

2nd paragraph, three bullets) (e.g. From the cited section it is evident that a

pattern is specified by specifying attributes to the tokens and then specifying an

annotation based upon previous assignment), with the base tokens for that text

to generate aligned annotations (e.g. This is implied when matching patterns.)

Claim Rejections - 35 USC § 103

14.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15.   Claims 5-7, 22-24, 30-32, and 45-47 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Cunnigham et al. in view of Broder et al. (US 2004/0243645).

As to claims 5, 22, 30, and 45, Cunningham et al. discloses wherein,

the means for assigning syntactic and semantic attributes to a text

passage (see sect. 6.5. and sect 4.4.2, last paragraph) .

However, Cunningham *et al.* does not specifically disclose the comprising

of independent annotators.

Broder *et al.* discloses the use of independent annotators (see [0153])

(e.g. It is seen that independent annotations are used for each type of word

pairs.)

It would have been obvious to one of ordinary skilled in the art at the time

the invention was made to have combined the fact extraction and annotation

taught by Cunningham *et al.* with the independent annotation taught by Broder *et*

al. The motivation to have use independent annotators is to resolve the issue of

overlapping annotations that occurs in nested XML (see Broder *et al.* [0128]).

As to claims 6, 23, 31, and 46, Cunningham *et al.* discloses

the use of XML for representing annotated text (see page 60, sect. 4.4.1,

1st paragraph).

As to claims 7, 24, 32, and 47, Broder *et al.* discloses

means for resolving conflicting annotation boundaries in the annotated text

to produce well-formed XML from the results of independent annotators (see

[0153]) (e.g. From the cited sections it is seen that the boundaries of the word

pairs are resolved from the previous conflict for differentiation by using separate

annotations).

16.   Claims 11, 36, and 51 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Cunningham *et al.* in view of Marcus *et al.* ("The PENN Treebank

Annotating Predicate Argument Structure", 1994).

As to claim 11, 36, and 51, Cunningham *et al.* discloses wherein,

the means for identifying and extracting potentially interesting pieces of

information comprises means for recognizing both true left and right constituent

attributes (see sect. 6.1.1 and page 81, 1st paragraph) (e.g. It is seen that a left

and right attributes are recognized by the tokeniser. Further it is admitted in the

Applicant's background that many pattern recognition languages have rules that

process text in left to right fashion(see Applicant's Specification, page 3, lines 2-

3)) and constituent attributes (see page 63, 1st paragraph).

However, Cunningham *et al.* does not specifically disclose the

identification of non-contiguous attributes.

Marcus *et al.* does disclose the identification of non-contiguous attributes

(see page 117, sect. 6, 2nd paragraph and example at bottom of page 117 on

right hand column) (e.g. A index number is added to the label of the original

constituent and allows interpretation).

It would have been obvious to one of ordinary skilled in the art at the time

the invention was made to have modified the fact extraction taught by

Cunningham *et al.* with the identification of non-contiguous attributes taught by

Marcus *et al.*. The motivation to have combined the references involves the

ability to represent sentences where complements of verbs occur after a

sentenial level verb (see Marcus *et al.*, page 117, sect. 6, 1st paragraph), which

would benefit the fact extraction tool taught by Cunningham *et al.* for recognizing

discontinuous constituents.

17.   Claims 13, 17, 38, and 53 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Cunningham *et al.* in view of Feldman *et al.* (US 6,442,545).

As to claim 13, 17, 38, and 53, Cunningham *et al.* discloses wherein,

the text pattern recognition rule regular expression functionality (see page

7, sect. 1.3.3., last two lines)and auxiliary definition (see page 82, 3rd paragraph,

and rule below) (e.g. From the cited portion a definition of GazLocation is given

for a portion of the pattern.)

However, Cunningham *et al.* does not specifically disclose the XPath –

based functionality

Feldman *et al.* does disclose the use of XPath-based (tree traversal , also.

defined by the applicant, see Applicant's Specification, page 3, line 2)

functionality (see col. 2, lines 15-22) (e.g. Hierarchical taxonomies are referred to

and relationships are built).

It would have been obvious to one of ordinary skilled in the art at the time

the invention was made to have modified the fact extraction taught by

Cunningham *et al.* with the use of XPath functionality taught by Feldman *et al.*.

The motivation to have combined the references involves content-based and

quantitative analysis of documents (see col. 2, lines 19-22).

Conclusion

18.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Carus (US 5,890,103) is cited to disclose a information retrieval by tokenizing

text and assigning tags. Walker (US 6,279,017) is cited to teach extracting text specific

attributes from machine readable text. Arnold *et al.* (US 6,910,003) is cited to disclose a

searching of information based on concepts. Murata *et al.* (US 2002/0013694) is cited to

teach a syntax analysis by using natural language patterns and seeing if it meets a tree

structure. Simpson *et al.* (US 2003/0167162) is cited to teach identification of word

patterns in a semantic network. Fass *et al.* (US 2004/0078190) is cited to teach a

information retrieval that matches concepts to user queries utilizing annotations.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Paras Shah whose telephone number is (571)270-1650.

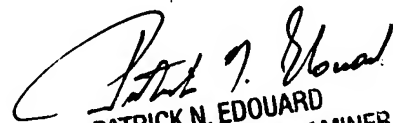The examiner can normally be reached on MON.-THURS. 7:30a.m.-4:00p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Patrick Edouard can be reached on (571)272-7603. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

P.S.

06/21/2007

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